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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/772,204	02/03/2004	Salman Akram	MI22-2499	4882
21567	7590	11/17/2004	EXAMINER	
WELLS ST. JOHN P.S. 601 W. FIRST AVENUE, SUITE 1300 SPOKANE, WA 99201			ABRAHAM, FETSUM	
			ART UNIT	PAPER NUMBER
			2826	

DATE MAILED: 11/17/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/772,204

Applicant(s)

AKRAM, SALMAN

Examiner

Fetsum Abraham

Art Unit

2826

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 75-95 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 79-95 is/are allowed.
- 6) ☒ Claim(s) 75-78 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_

- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_

### DETAILED ACTION

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 75-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cheah (6,586,280).

As for claims 75,78, the patent discloses a semiconductor packaging structure in figure 3 composed of an insulative substrate (120) having circuitry on its upper and lower surfaces, openings through its thickness, a die (112) adhered to the substrate by conductive epoxy resin (118) and connected to the bottom surface circuitry through the vias filled with conducting materials or electrical interconnects, and a metal layer (114) attached to the die. Although the terminologies used to describe device elements differ and expressions such as "board on chip" may be missing in the prior art, it would have been obvious to one skilled in the art to consider the expressional differences and arrive at the conclusion that both structures were similar both physically and conceptually since expressions are known to be subjective in the art that differ from an inventor to another.

The prior art further omits "flexible metal" to describe the metallic layers on the chip, however, it would have been obvious to one skilled in the art to use any type of metal on the structure of the prior art since no type of metal is excluded by the patent.

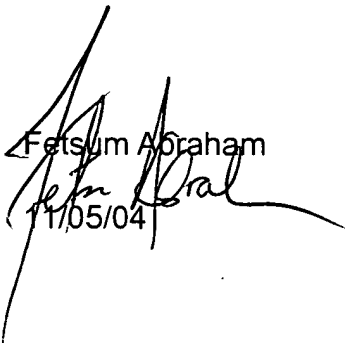
As for claims 76,77, there is a metallic layer (116) on the bottom surface of the chip and a conductive adhesive material (118) connects the metal to the substrate.

Claims 79-95 have been allowed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Refer to PN: 6,229,227.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Fetsum Abraham whose telephone number is: 571-272-1911. The examiner can normally be reached on 8:00 - 18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 571-272-1915.

Fetsum Abraham  
  
11/05/04